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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,714

09/02/2005

David Dreher

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EXAMINER

VERBITSKY, GAIL KAPLAN

ART UNIT

PAPER NUMBER

2859

MAIL DATE

DELIVERY MODE

05/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,714

Applicant(s)

DREHER ET AL.

Examiner

Gail Verbitsky

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: attachment #1.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manecke (U.S. 4491680) in view of Jen et al. (U.S. 5951163) [hereinafter Jen].

Manecke discloses in Fig. 7 a temperature sensing device that could be used to measure temperature of a surface, the device comprising a temperature sensing element (thermocouple) comprising two leads 51 and 52 which pulls through a sensor body 50 in corresponding holes as far as an outer wall of the sensor body. The device also has a crimping sleeve 49 firmly crimped over an equalizing line (insulation) 48 that is arranged in the crimping sleeve 49. The cross section of the equalizing line is reduced in the place of the crimping, as shown in Fig. 8.

For claim 2: The sensing element projects from the equalizing line into the sensor body 50.

Manecke does not explicitly teach to use the device to measure temperature of an (wall) injection-molding device.

Jen teaches that it is very well known in the art to use standard thermocouples to measure temperature of a (wall) injection-molding device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Manecke, so as to use it to measure temperature of a (wall) injection molding device, because Jen teaches that a standard/

conventional thermocouple could be used for this purpose, therefore, such a use will minimize the manufacturing costs by using a known device.

The method steps will be met during the normal process of production of the device stated above.

3. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manecke (U.S. 4491680).

Manecke discloses in Fig. 7 a temperature sensing device that could be used to measure temperature of a surface, the device comprising a temperature sensing element (thermocouple) comprising two leads 51 and 52 which pull through a sensor body 50 in corresponding holes as far as an outer wall of the sensor body. The device also has a crimping sleeve 49 crimped over an equalizing line (insulation) 48 that is arranged in the crimping sleeve 49. The cross section of the equalizing line is reduced in the place of the crimping, as shown in Fig. 8.

For claim 2: The sensing element projects from the equalizing line into the sensor body 50.

With respect to the preamble of claim 1: the preamble of the claims does not provide enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and a portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Kropa v. Robie, 88 USPQ 478 (CCPA 1951).

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manecke and Jen. Manecke and Jen disclose the device, as stated above.

They do not teach the particular material (insulation) for the equalizing line, as stated in claim 12.

With respect to the particular material, i.e., glass silk or Kapton, as stated in claim 3, to make the external insulation/ equalizing line, absent any criticality, is only considered to be the "optimum" material that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the insulation disclosed by Manecke and Jen art since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. In re Leshin, 125 USPQ 416. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the insulation in the device disclosed by Manecke and Jen of Kapton, because Kapton is known to be an insulation commonly used in thermometers.

The method steps will be met during the normal process of production of the device stated above.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manecke and Jen, as applied to claims 1-2 above, and further in view of Fox (U.S. 4875782).

Manecke and Jen disclose the device, as stated above.

They do not teach an extraction thread, as stated in claim 13.

Fox discloses a device in the field of applicant's endeavor comprising extraction threads A adjacent to a crimping sleeve 28. (the numeral A has been added by the Examiner, see attachment # 1 to the Office action).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Manecke and Jen, so as to add an

extraction thread, as taught by Fox, in order to make the device removable and replaceable should the device become damaged.

The method steps will be met during the normal process of production of the device stated above.

6. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manecke in view of Jen and Steinel et al. (U.S. 6299349) [hereinafter Steinel].

Manecke and Jen combined disclose the device, as stated above.

Manecke does not teach all the limitations of the method steps, as stated in claims 15-16.

Steinel discloses in Fig. 2 a device in the field of applicant's endeavor (for direct/ contact measuring temperature in injection molding apparatuses) wherein a temperature sensing element is being made in flush with an outside wall 72 by means of welding or grinding.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Manecke, so as to weld or grind the temperature sensing element, as taught by Steinel, in order to make it flush with an outer wall to ensure accurate temperature measurements by providing a good contact of the temperature sensing element with a surface of interest by means of the outer wall.

The method steps will be met during the normal process of production of the device stated above.

7. Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babcock et al. (U.S. 3797310) [hereinafter Babcock] in view of Manecke.

Babcock discloses in Fig. 2 a device in the field of applicant's endeavor comprising a temperature sensor/ probe inserted in a mold wall to sense the temperature of the mold wall 10.

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The temperature probe comprising a temperature sensing point 22 protruding out of the housing through an orifice. The probe has threads, the threads are, inherently located near any components of the probe.

Babcock does not have a crimping means, and the remaining limitations of claims 10-15.

Manecke discloses in Fig. 7 a temperature sensing device that could be used to measure temperature of a surface, the device comprising a temperature sensing element (thermocouple) comprising two leads 51 and 52 which pulls through a sensor body 50 in corresponding holes as far as an outer wall of the sensor body. The device also has a crimping sleeve 49 crimped over an equalizing line (insulation) 48 that is arranged in the crimping sleeve 49. The cross section of the equalizing line is reduced in the place of the crimping, as shown in Fig. 8.

For claim 2: The sensing element projects from the equalizing line into the sensor body 50.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Babcock so as to add a crimping means, as taught by Manske, in order to keep the probe tightly inside the housing in a harsh environment.

8. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babcock in view of Manecke and Steinel et al. (U.S. 6299349) [hereinafter Steinel].

Babcock and Manecke combined disclose the device, as stated above.

They do not teach all the limitations of the method steps, as stated in claims 15-16.

Steinel discloses in Fig. 2 a device in the field of applicant's endeavor (for direct/ contact measuring temperature in injection molding apparatuses) wherein a temperature-sensing element is being made in flush with an outside wall 72 by means of welding or grinding.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Babcock and Manecke, so as to weld or grind the temperature sensing element, as taught by Steinel, in order to make it flush with an outer wall to ensure accurate temperature measurements by providing a good contact of the temperature sensing element with a surface of interest by means of the outer wall.

The method steps will be met during the normal process of production of the device stated above.

Response to Arguments

9. During the interview on April 19, 2007, the Applicant argued that the previous Office Action mailed on January 18, 2007 has not addressed the preliminary amendment. In view of arguments presented by Applicant, this Office Action is issued to replace the previous Office action mailed on January 18, 2007.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

JP 06074837A discloses a device comprising a temperature sensor 11 for measuring temperature/ heat flux from a mold wall.

Howell (U.S. 3745828) discloses a device for measuring temperature of a mold wall 12 comprising a temperature probe. Howell does not teach the particular probe as claimed by applicant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/ 272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571/ 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GKV

Gail Verbitsky
Primary Patent Examiner, TC 2800



May 10, 2007

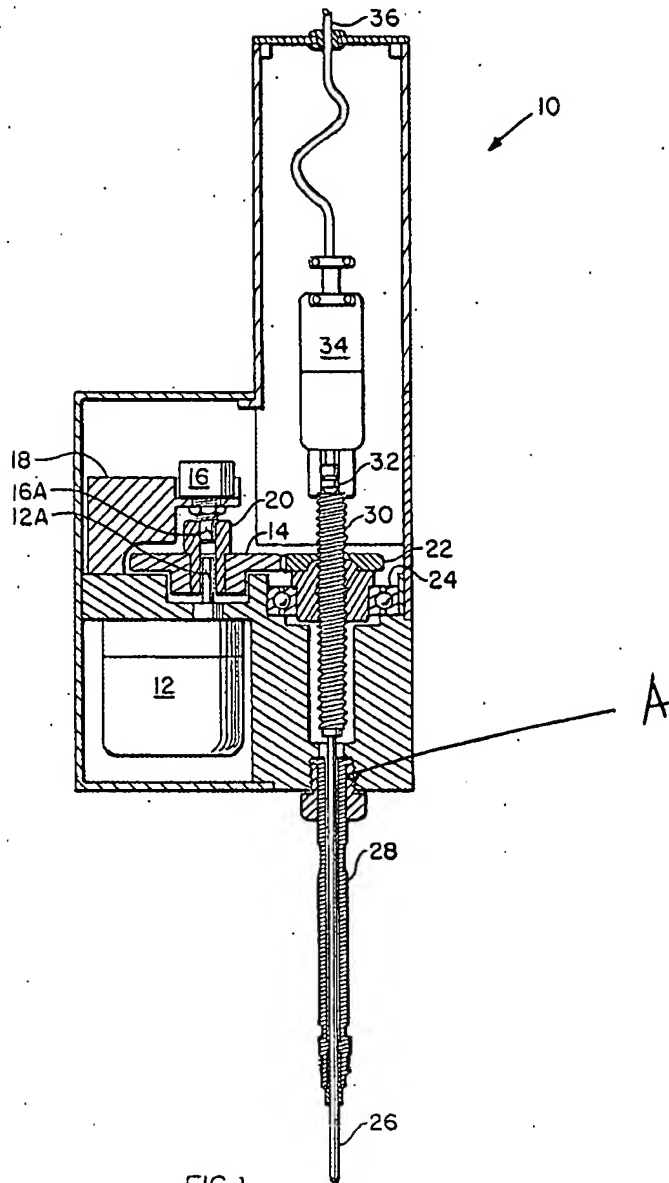


FIG. 1

attachment # 1
(12/28/2006)